

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A plate heat exchanger adapted to exchange heat between at least one high temperature fluid and at least one cooling fluid comprising a plurality of stacked heat exchanger plates, each plate comprising: (a) an inlet opening for the high temperature fluid, (b) an outlet opening for the cooling fluid, (c) an outlet opening for the high temperature fluid and (d) an inlet opening for the cooling fluid, the stacked heat exchanger plates limiting channels for at least two heat exchanging fluids, and pairs of said plates limiting channels for a cooling fluid are soldered together along contact areas to form flanges extending into the inlet of flow of the high temperature fluid, wherein two separate channels for the cooling fluid are provided adjacent to said contact areas forming a flange extending into the flow of said high temperature fluid passing through the inlet opening, said two separate channels for the cooling fluid being provided with a common inlet and with a common outlet, the common inlet being located at a higher flow pressure position than that of the said common outlet, one of said channels being partly limited by a pressed ridge in one of the plates forming said pairs of plates limiting said

channels for the cooling fluid, said pressed ridge being adapted to contact a corresponding ridge on another plate in said pair of plates, said one channel adjacent to said pressed ridge having less height than said pressed ridge; and wherein in each heat exchanger plate, said inlet opening for the flow of the high temperature fluid is of a larger area than that of the outlet opening for said high temperature fluid.

2. (Canceled).

3. (Previously Presented) A plate heat exchanger according to claim 1, wherein said high temperature fluid is a gas.

4. (Previously Presented) A plate heat exchanger according to claim 1, wherein each said heat exchanger plate is substantially rectangular in shape and each said inlet opening and each said outlet opening for each said heat exchanging fluid is placed near corners thereof.

5. (Previously Presented) A plate heat exchanger according to claim 1, wherein said heat exchanger is designed for three heat exchanging fluids: (i) one high temperature heating fluid and (ii) two cooling fluids.

6. (Previously Presented) A plate heat exchanger according to claim 5, wherein the inlet opening of the

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heating fluid is positioned remote from the inlet opening and the outlet opening for one of the two cooling fluids.

7. (Previously Presented) A plate heat exchanger according to claim 1, wherein said heat exchanger is designed for three heat exchanging fluids: (i) two heating fluids and (ii) one cooling fluid, the inlet opening and the outlet opening for the two heating fluids being positioned on both sides of the inlet opening and the outlet opening for the cooling fluid.

8. (Canceled).